REMARKS

Claims 1-4, 8-23, 39, and 45-46, as amended, and new claims 47-51 are pending in this application. In this Response, Applicants have amended certain claims. In light of the Office Action, Applicants believe these amendments serve a useful clarification purpose, and are desirable for clarification purposes, independent of patentability. Accordingly, Applicants respectfully submit that the claim amendments do not limit the range of any permissible equivalents.

In particular, independent claims 1, 4, and 39 have been rewritten to further clarify the embodiments of the present invention recited therein. In addition, various dependent claims have been rewritten or canceled to maintain consistency with the language now recited in the independent claims. Finally, new claims 47-51 have been added to recite additional embodiments of the invention that are fully supported by the Specification. As no new matter has been added, Applicants respectfully request entry of these amendments at this time.

ALLOWABLE SUBJECT MATTER

In the previous Office Action, the Examiner indicated that claims 28, 32, and 41 were allowable if rewritten in independent form. *See* October 12, 2006 Office Action at Page 4. In response, claims 24, 30, and 39 were rewritten to include the subject matter previously recited in these claims. *See* Response to Office Action mailed March 12, 2007 ("previous response"). In light of the new rejection of these claims, it appears that the Examiner has withdrawn his previous recognition of allowance based on the newly cited combination of Shimosaka and Blahak. This rejection is addressed below.

THE REJECTIONS UNDER 35 U.S.C. § 103

Claims 1, 2, 4, 18, and 19 were rejected under 35 U.S.C. § 103(a) as being anticipated by U.S. Patent No. 5,816,937 to Shimosaka *et al.* in view of U.S. Patent No. 5,866,258 to Lucas for the reasons stated on pages 2-3 of the Office Action. In addition, the Examiner rejected claims 24-26, 30, 39, and 43-46 under 35 U.S.C. § 103(a) as being obvious over Shimosaka in view of U.S. Patent No. 4,631,319 to Blahak *et al.* as provided on pages 3-4 of the Office Action. Claims 1-4, 8-18, and 21-23 were rejected under 35 U.S.C. § 103(a) as being anticipated by U.S. Patent No. 6,290,614 to Kennedy III *et al.* in view of U.S. Patent No. 4,742,128 to Frisch *et al.* for the reasons stated on pages 4-5 of the Office Action. None

of the references alone, or in any combination, disclose or suggest the present invention for at least the reasons that follow.

With regard to the rejection based on the combination of Shimosaka and Lucas, as recognized by the Examiner, Shimosaka does not disclose or even suggest interpenetrating polymer networks (IPNs). In an attempt to remedy this deficiency, the Examiner relies on Lucas and its disclosure of self-crosslinkable IPNs regardless of the fact that Lucas is completely silent as to the use of IPNs in golf balls. However, a skilled artisan would have lacked any motivation to combine Shimosaka and Lucas (absent the present invention to use as a template) to arrive at the present invention as discussed in greater detail in the previous response. Despite the lack of a prima facie case of obviousness, in an effort to expedite allowance of the claims in this application, claims 1 and 4 have been rewritten to include subject matter that corresponds to variations of claims 22 and 10, respectively. And, as discussed in greater detail below, the subject matter of claims 22 and 10 are not anticipated or rendered obvious by any of the cited references including the combination of Kennedy and Frisch.

Furthermore, with regard to the rejection of claims 24-26, 30, 39, and 43-46, Applicants respectfully submit that this rejection is moot with respect to claims 24-26, 30, and 43-44 based on the cancellation of these claims and overcome with respect to claims 39 and 45-46 based on the amendments therein. In particular, independent claim 39 has been rewritten to feature an interpenetrating polymer network formed from a material selected from the group consisting of a homopolymer or copolymer including halogen groups. As discussed above, Shimosaka does not even suggest the use of IPNs. In addition, Blahak does not disclose or suggest the presently recited IPN, *i.e.*, one formed from a homopolymer or copolymer including halogen groups.

Finally, with regard to the rejection of claims 1-4, 8-18, and 21-23 based on the combination of Kennedy and Frisch, Applicants respectfully submit that the cited combination is not proper. In particular, Kennedy is completely silent as to IPNs, the formation of IPNs, or the use of IPNs in golf balls and Frisch is completely silent as to the use of his IPNs in golf balls. Thus, assuming *arguendo* that a skilled artisan would have even been motivated to look to Frisch to modify Kennedy as suggested by the Examiner, he/she would have needed to rely solely on the explicit teachings of Frisch with regard to IPN formation. However, Frisch teaches that the mold must be heated to a temperature much

higher than the temperatures taught by Kennedy.[1] In particular, Kennedy teaches that the mold must be heated to temperatures between 90°F to 180°F (Col. 7, line 65 to Col. 8, line 3), whereas Frisch teaches much higher mold temperatures, *i.e.*, above 100°C (212°F), preferably about 120°C to about 175°C (248°F to 347°F) (Col. 23, line 53 to Col. 24, line 5). Those of ordinary skill in the art are aware that even the lowest possible mold temperature taught by Frisch (*i.e.*, 212°F) is too high for golf ball molding at least because of the structural degradation of the materials used therein.

And, because Kennedy's invention is centered around the reducing the time and energy associated with the production of polyurethane golf ball covers (Col. 1, lines 36-40), one of ordinary skill in the art would have to completely ignore this objective to even attempt to use Kennedy's lower mold temperatures to form the Frisch IPN. However, based on the express teachings of Frisch, including the instruction to use "specific process reaction conditions" (Col. 6, lines 63-64), a skilled artisan would have lacked any expectation of success that the IPN and method of forming the IPN taught by Frisch could be adapted for use in forming the Kennedy golf ball. In fact, the use of much lower mold temperatures than taught by Frisch would likely result in a) a much longer processing time than desired by Kennedy, b) no lactam polymerization (*i.e.*, no IPN), or c) both a) and b).

In addition to the lack of motivation and lack of expectation of success, the combination of Kennedy and Frisch does not even suggest the additional IPN properties recited in these claims, *i.e.*, glass transition temperature, area under a melting endotherm, average phase size, and shear resistance rating. In sum, a skilled artisan would not have arrived at the present invention if presented with both Kennedy and Frisch.

For at least the reasons above, Applicants respectfully submit that none of the cited combinations render obvious the pending claims. Thus, Applicants respectfully request reconsideration and withdrawal of the § 103 rejections based thereon.

CONCLUSION

All claims are believed to be in condition for allowance. If the Examiner believes that the present amendments still do not resolve all of the issues regarding patentability of the

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1 Frisch teaches that, while the reactant streams may be mixed at a lower temperature, *e.g.*, from 30°C (86°F) to 180°C (356°F), the actual IPN is not formed until the reaction mixture is introduced into a heated mold. Col. 23, lines 28-54. In particular, the mold temperature is mainly governed by the lactam polymerization. Col. 23, lines 64-67.

pending claims, Applicants invite the Examiner to contact the undersigned attorneys to discuss any remaining issues.

No fees are believed to be due at this time. Should any fee be required, however, please charge such fee to Bingham McCutchen LLP Deposit Account No. 50-4047, Order No. 20002.0041.

Respectfully submitted,

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